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Remarks

This Amendment is in response to the Office Action dated **November 9, 2005**. In the Office Action, the specification was objected to under 35 USC 132(a), claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17 and 19-23 were rejected under 35 USC 112, first and second paragraphs and claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17 and 19-23 were rejected under 35 USC 103(a) as being unpatentable over Schumacher (US 5,315,914).

For reasons presented herein, Applicant has traversed the rejections and respectfully asserts that the claims are in condition for allowance.

The paragraph numbers below correspond to those of the Office Action.

Specification

Paragraph 4.

In the Office Action, the amendment filed 8/12/05 was objected to under 35 USC 132(a) because it introduces new matter into the disclosure. Specifically, the Office Action asserts that "The barrel formed of any combination of light-weight metal, plastic, or fiberglass" was not described in the specification at the time the application was filed." In the amendment filed 8/12/05, claim 23 was added. Claim 23 states "The firearm according to claim 21, wherein at least one section is constructed of material selected from the group consisting of light-weight metal, plastic, fiberglass, or any combination thereof. According to MPEP 608.01(p), "*Markush* claims must be provided with support in the disclosure for each member of the *Markush* group." Applicant asserts that the application as filed provides support for each member of the Markush group of claim 23. On page 3 of the specification, lines 25-27, the specification states that "the elongated vented gun barrel 10 may be formed of light weight metals and/or materials such as

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aluminum, plastic, fiberglass, and/or other materials at the discretion of an individual.” The specification further states that “[t]he use of light weight metals and/or other materials such as aluminum, plastic, and/or fiberglass are anticipated to be utilized to form the elongated vented gun barrel 10 beyond 18 inches or 45.72 centimeters extending from the breach end 14.”

Applicant respectfully requests the examiner withdraw the objection of claim 23 pursuant to 35 USC § 132(a).

35 USC 112

Paragraphs 6-7.

In the Office Action claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17 and 19-23 were rejected under 35 USC 112, first paragraph because “the specification ... does not reasonably provide enablement for how the vents are constructed and arranged to minimize sound report.” Applicant asserts that the specification does provide enablement for how the vents are constructed and arranged to minimize sound report.

The specification teaches that arranging the vents along the length of the barrel minimizes sound report. The specification states that “[a] plurality of vents are preferably disposed through the elongate barrel where the vents initiate approximately 12 inches from the breach end, extending and terminating proximate to the muzzle end,”(pg 2, ln 5-7) and that “[t]he positioning of the vents 30 along the length of the elongated vented gun barrel 10 preferably minimize report of the firearm 12 following discharge” (pg. 5, ln 7-9).

The specification further teaches that more vents help to minimize sound report because the high pressure gases are slowly released through the vents positioned along the length of the barrel instead of being released all at once from the muzzle of the gun: “[t]he use of the elongated vented gun barrel 10 enables the gradual release of high pressure gasses through the

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vents 30 to reduce report and sound pressure intensity emanating from the muzzle 16 by the time a projectile reaches the muzzle 16 following discharge of the ammunition. An increase in the length dimension of the elongated vented gun barrel 10 in turn, provides more space to strategically place vents 30, and more time to slowly release gas pressure in the barrel to minimize report" (pg. 6, ln 19-24). In addition, the General Description states that one advantage of the present invention is "the controlled release of high pressure gasses more slowly to significantly reduce the sharpness of the report of a firearm" (pg 2, ln 14-16) and another advantage is "the gradual and controlled venting of high pressure gasses to minimize firearm report (pg. 2, ln 19-20).

In addition, the specification teaches that the position of the vents about the circumference of the barrel may be varied: "[t]he vents 30 as disposed within each section 32 may be aligned in a pattern of straight lines, offset lines, random spacing, and/or spiral configuration" (pg 5, ln 31 to pg 6 ln1).

Figures 1 and 2 illustrate the vents 30 positioned along the length of the elongated vented gun barrel 10. The Figures also illustrate "vents 30 disposed within each sector 32 are regularly spaced from adjacent vents 30" (pg 5, ln 19-20). The Figures also illustrate that the spacing between vents can be different for different sectors. For example, Figure 2 shows a firearm with three sectors, each sector having a different spacing between vents: the sector closest to the breach end has four inch spacing between vents, the middle sector has three inch spacing between vents and the sector closest to the muzzle has two inch spacing between vents (see figures 1, 2, and 3).

Applicant has amended the specification to describe the spacing between vents as depicted in figures 1 and 2. No new matter has been added.

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Applicant disagrees that Renner (US 5,844,162) discloses "a device identical to the device disclosed" in the instant application. Figures 1, 3 and 6 of Renner teach a barrel with six vents positioned on each side of the barrel near the muzzle of the rifle with no other vents positioned along the length of the barrel. According to Renner it is important that the two sets of vents have a symmetrical arrangement to the vertical axis of the barrel in order to prevent sideways movement of the muzzle upon firing or vibration of the barrel which would affect shot accuracy and could not be controlled (4:15-16 and 4:21-24). In addition, Fig. 3 of Renner illustrates that the position of the vents is controlled by the spiral rifling of lands and grooves and it is unclear if vents can be positioned along the length of the barrel when each vent is "contained entirely within rifling grooves" and cannot be "contained within a land" or "cut into the shoulder of a land".

In addition, Renner states that **"the vents of the present invention appear to scatter the blast, that is the sound, of firing a muzzleloading rifle.** In experimental test of prototypes while hunting, game appeared to be unable to detect the **source of the sound** and were thus **not able to use the sound** to detect the location of the hunter" (3:16-21). Thus, according to Renner, the game can hear the sound of the muzzleloading rifle being fired but the game cannot discern the location of the rifle because the sound is directed outward from the rifle in multiple directions instead of one direction. The declaration specimens submitted by Applicant also support the assertion that vents, positioned on the barrel near the muzzle only, as shown in the Figures of Renner, do not minimize the sound of the rifle being fired. Since the sound of the rifle firing is merely scattered to multiple directions and not minimized, the vents of Renner are not "constructed and arranged" or "positioned along the barrel" "to minimize sound report" as required by independent claims 1 and 19 of the instant invention.

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Therefore Applicant asserts that the specification does provide enablement for how the vents are constructed and arranged to minimize sound report and requests withdrawal of the objection.

Paragraph 8.

In the Office Action claim 23 was rejected under 35 USC 112, first paragraph as failing to comply with the written description requirement because "The barrel formed of any combination of light-weight metal, plastic, or fiberglass was not described in the specification at the time the application was filed."

As argued above in the response to paragraph 4, Applicant asserts that the application as filed provides support for each member of the Markush group of claim 23. Therefore, Applicant requests withdrawal of this rejection.

Paragraphs 10-11.

In the Office Action claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17 and 19-23 were rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention and as being incomplete for omitting essential elements which is "how the vents are constructed and arranged to minimize sound report." As discussed above in the response to paragraphs 6-7, the specification and Figures teach how to construct and arrange the vents to minimize sound report. Therefore, Applicant requests withdrawal of this rejection.

Paragraph 12.

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In the Office Action, claims 14, 15 and 17 were rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action states that dependent claims 14, 15, and 17 are indefinite because they claim at least more than one sector whereas claim 12 from which they depend states at least one sector.

Applicant has amended claims 14, 15, and 17 to remove any indefiniteness as asserted by the examiner. Applicants have duplicated the language from the relevant predecessor claim. Applicant respectfully asserts that the scope of claims 14, 15, and 17 have not been altered by the amendment herein. Therefore Applicant requests withdrawal of this rejection because claims 14, 15 and 17 are proper dependent claims which further limit independent claim 12 from which they depend.

35 USC 103

Paragraph 14.

In the Office Action, claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17 and 19-23 were rejected under 35 USC 103(a) as being unpatentable over Schumacher (US 5,315,914). To further prosecution, Applicant has amended instant independent claims 1 and 19 to include the recitation of "one barrel" and the "gradual release of gasses directly into the atmosphere through said vents." Support for the amendment can be found at least in Figs. 1 and 2 of the instant application. Schumacher does not teach or suggest one barrel or the gradual release of gasses into the atmosphere through said vents as recited by the instant independent claims. Schumacher teaches the release of gasses from one barrel of the rifle through vents into the second barrel of the rifle.

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To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations (MPEP 2142). Since Schumacher does not teach or suggest all the claim limitations of instant independent claims 1 and 19, the addition of a vent size of less than $\frac{1}{2}$ inch, which the Office Action asserts is obvious, does nothing to address the failure of Schumacher to teach or suggest all of the claim limitations of instant independent claims 1 and 19. Since Schumacher does not teach or suggest all the claim limitations of instant independent claims 1 and 19, the addition of one barrel having vents having a size less than $\frac{1}{2}$ " in diameter to minimize some report by gradual release of gasses directly into the surrounding atmosphere, the claims are allowable over the Schumacher reference. The assertions of the office action do nothing to address the failure of Schumacher to teach or suggest all of the claim limitations of instant independent claims 1 and 19. Applicant respectfully asserts that the examiner has impermissibly utilized hind sight in rejecting applicant's claims herein. Applicant respectfully asserts that the Schumacher reference teaches away from the use of a single barrel and the venting of gasses directly into the atmosphere to reduce sound report. Applicant respectfully requests that the examiner reconsider and withdraw the rejection of claims herein pursuant to 35 USC § 103.

Instant claims 2-3, 5, 6, 8, 9, 12, 14, 15 and 17 are dependent from independent claim 1 and instant claims 20-23 are dependent from independent claim 19. It is recognized that dependent claims are non-obvious under section 103 if the independent claims from which they depend are non-obvious. *Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108, 2 USPQ2d 1826, 1831 (Fed. Cir. 1987); *In re Abele*, 684 F.2d 902, 910, 241 USPQ 682, 689 (CCPA 1982); see also *In re Sernaker*, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983). Withdrawal of the rejection is respectfully requested.

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Conclusion

In view of the foregoing, it is believed that claims 1-3, 5-6, 8-9, 12, 14-15, 17, and 19-23, in the present application are in condition for allowance. Applicant respectfully requests reconsideration of the claims herein and that the rejections be withdrawn and the claims allowed. Early action and notification to that effect is earnestly solicited.

Respectfully submitted,

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